

## THE LURE OF MEDICAL HISTORY\*

### "GOLD ALLEY" OR THE "STREET OF THE FAKERS"

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THOSE who have visited Prague may recall a section known as the Hradschin, by St. George's Church, wherein is situated a narrow, steep street, no more than an alley, containing several small huts which are maintained today only to be shown to the tourist visitor. This tiny, short street, or alley, can recall unto itself a day when it was known far and wide over the then known world, a day when it attracted to its small almost make-believe houses, the greatest astronomers, mathematicians, physicians, philosophers, and alchemists from every part of the civilized world.

For this is the "Street of the Alchemists" or "Gold Alley." Later it came to be known by the more opprobrious name of the "Street of the Fakers."

The cause d'être of this world fame was the equally famous gullibility of the German Emperor, Rudolph II of Germany, who ruled here from 1576-1612, as King of Hungary, King of Bohemia, Emperor of Germany, and came to be known as the "Solomon of Bohemia." At the age of twenty-four he had succeeded to the throne and, despising the gay and frivolous life of Vienna, had returned to Prague, there to assume the rôle of a magnificent patron of the arts and sciences. He did not, however, as would a true scientist, pursue science for the purpose of increasing knowledge; the philosopher or astronomer were less welcome at his court than the charlatan who claimed to be able to produce gold from a base-metal by alchemical processes, or those who pretended to hold the formula of the "Elixir of Life."

#### ALCHEMY

Greed for gold was paramount with this sovereign, and to him who claimed ability to produce it was assigned a small shack wherein to work and money for experimentation; and the collection of these shacks just outside the palace gates formed this "Street of Alchemists." It acquired world fame, and this fame brought the curious, the credulous, the avaricious, the professional tricksters and thieves, like flies drawn to a tasty morsel.

"Nasty, soaking, greasy fellows,  
Knives would brain you with their bellows;  
Hapless, sapless crusty sticks,  
Black, as smoke can make their bricks."

Alchemy was defined by this same motley crew as a "coquette inviting a flirtation, but denying favors; an art without any art, of which the beginning is avarice, the middle falsehood, and the end

either a beggar's staff or the gallows." Each one hoped to escape this end.

But, mixed among these fortune tellers, charlatans and tricksters were those of more serious mind, genuine artists in whose modest workshops the highest degree of art was attained, and a ready market for their wares found at the Court of Rudolph II.

Such were the gold and silversmiths, the engravers of precious metals, the cutters of precious stones, cameo cutters, wood carvers, illuminators of manuscripts, painters and sculptors.

Rudolph's particular fetish was alchemy, the transmutation of baser metals into gold; and although a patron of all arts, his particular hobby was gold, and so was his greed. This was nothing new; philosophers for centuries had written of the "Philosopher's Stone" and the "Elixir of Life." Some claimed to have found it, but lost it again; others claimed still to have the formula, or to know of somebody, somewhere who at some time had heard of somebody who knew it. As the formula carried with it immense riches, by reason of conversion of base-metals into gold, also long life, because the secret of youth was somehow attached to gold, it can be seen that diligent search for it would be the order of the day. Monarchs, with absolute power over their minions, would have fetched to them, at their bidding, any alchemist or pseudo-alchemist who had made claim to any discovery. "Goldwasser," that liqueur with flaked gold scattered through the contents, which once sold over all of Europe as a cure-all, the "elixir of life," and is still sold in some parts of Europe, originated with the chemists of this short street in Prague.

#### THEOPHRASTUS PARACELSUS

But this tiny alley was of importance to the medical world. The zenith and sum of all alchemists was, of course, the renowned Theophrastus Paracelsus. He had been called the "German Hermes," and was held in reverent memory almost as a god. Although he died in 1541, his influence was enormous and far-reaching. He had been the first to rebel against the school and doctrines of Galen; he had treated diseases with metals, gold-silver-antimony, and mercury; and the story had spread that he had cured many who had been given up to die, and also, by means of metals, had cured thirteen princes, whose cases had been given up for dead. After his death his pupils gravitated to all parts of the world and preached his doctrines. Many came to this "Gold Alley"; and although they committed great errors in their ignorance, they served to bring about the parting of the ways and the division of medicine into two schools of thought—the one of adherents to the theories of Galen, the other, of those preaching the "new idea" of Paracelsus. So it was that, in the nature of an illegitimate offspring of the multifold activities here, this came about.

#### TRANSMUTATION OF GOLD

Primarily and fundamentally everyone was concerned with discovering the means by which base-metals could be converted into gold. Alchemy was

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"Gold Alley" or "Street of the Fakers," as it is today, practically unchanged from the time of Rudolph the Second, 1608.

the order of the day. The "elixir of life" and "aurum potabile" (drinkable gold), which prolonged life, were the topic of the hour. The people therefore being "gold-minded," it can readily be seen that the groundwork for the change from the humoral theories of medicine to those which treated disease by the use of metals was fertile and ready. The psychology of the people was timely, so to speak.

So, to these small shacks in "Gold Alley," many of which are still standing, were assigned in particular those whose duty it was to work out formulae for transmutation of gold; and these shacks constituted their laboratories. Those who came here and claimed any special knowledge were given opportunity to prove their claims, and money was furnished to carry on experiments, much in the manner of our research grants of today, but with this difference: Woe to him who failed to fulfil his promise, because extreme torture and imprisonment was his lot!

Many tricksters came only to wheedle sums of money from the gullible monarch, and to escape before falling into his clutches; and many were the tricks resorted to in order to maintain their claims.

Some of these pseudo-chemists used double-bottomed crucibles, the false bottom being made of crucible dust and wax in two layers, with true gold between, so that when the crucible was exposed to the heat of fire the wax layer melted and the gold lay in the bottom of the crucible.

Another method was to have a hollow rod for stirring the ingredients of the crucible, the end of the rod being stoppered with wax, which melted

easily in the heat of the fire; and gold powder secreted in the rod was thus transferred to the bottom of the crucible.

Others made a compound of gold and mercury known as amalgam; and this, when heated to a high temperature, allowed the mercury to evaporate in smoke, leaving the gold behind.

Paracelsus himself had been a firm believer in the virtues of gold medicinally, and also that the "elixir of life" was composed of gold. He had stated that the search for the "Philosopher's Stone" represented the "Golden Fleece" of the Middle Ages, and that it was composed of gold in some altered form. When asked for his description of the "Philosopher's Stone," he portrayed it as "a solid, the color of a dark ruby, transparent and flexible, yet as brittle as glass, able to transform one hundred times its weight of mercury into gold."

#### FOUNDATION OF CHEMISTRY

Yet in spite of this great ignorance, and in spite of the large amount of pseudoscience and humbuggery, this alley contributed a startling array of new theories, new discoveries of immense value to all of the sciences in the years following. During the years of Rudolph's reign, there was exerted from here a tremendous influence upon the medicine which was to follow. These late years of the sixteenth, and early years of the seventeenth centuries found medicine at a crossroads. The adherents of Paracelsus had become clamorous for the overthrow of the theories of Galen; and as they were in greater numbers, they succeeded in accomplishing this to no small degree.

They served to break the hold of Galenism upon the existing medical thought and, in so doing, paved the way for our modern school of chemistry. This was fortunate for medicine, because it shook medicine out of its rut and pushed it forward and onward. So the charlatans, the tricksters, the alchemists served their purpose in that, through keeping alive an interest in alchemy, a school of chemistry was born.

#### SOME CONTRIBUTIONS OF "GOLD ALLEY"

But let us examine some of the contributions of this "Alley" to science in general. It was here that monks worked laboriously, translating the old secret manuscripts and formulae, preparing in beautifully illuminated script translations of Aristotle, Albertus Magnus, Thomas Aquinas, Roger Bacon and others, that formed the true link in the transition of these from the dead languages into later and more modern tongues.

*Astronomy.*—But, to name some of the discoveries, some of the valued contributions. It was here, in this "Alley," that John Kepler explained the physics of the eye and the action of lenses. Kepler was an astronomer, a graduate of the University of Tübingen, who had been called to Prague by Emperor Rudolph as assistant to Tycho Brahe, "the greatest of astronomers." It was here that Kepler promulgated his "Laws," three in number, still vital in astronomy. Here he improved the telescope by inserting two convex lenses, thus increasing the field of view. He was the originator of the present-day "Farmer's Almanac." Being much in need of funds, he published what he described as "a vilely, prophesying almanach, which is scarcely more respectable than beggary." He was a serious worker and thinker, and was against the idea of prophesying by the stars and also against prostituting his science.

*Clinical Thermometer.*—It was asserted that the first clinical thermometer was invented here by a fanatic named Drebbel, who also claimed that he had solved the problem of perpetual motion.

*Medical Treatise.*—One of the first treatises in medical practice was announced here by Dr. Oswald Croll, physician to Rudolph. One of his principles was that "it is the principal duty of a physician to comfort the heart, and afterward assault the disease."

*Sexual System in Plants.*—From here a Bohemian naturalist, Zaluzansky, discovered the sexual system in plants, thereby anticipating Linnaeus.

*Camera.*—A Jewish rabbi, Zezalel Loew (the Roger Bacon of the Jews), experimented secretly with a camera; but due to the possibility of being accused of being in league with unholy spirits, the penalty for which was death, no public announcement of his experiments was ever made.

*Power of the Mind.*—Christian Science might almost claim its foundation here. Paracelsus had preached the power of mind over body, and his disciples stressed it even more than he—discipline of the mind also.

*Elixir for Epidemics.*—Tycho Brahe, the great astronomer of the Middle Ages, also dabbled in medicine, as most physicians were astronomers; it being declared that physicians ignorant of astronomy were no better than murderers. He had invented an elixir, and this was widely sold as a preventive against the epidemics which raged over Europe. It consisted mainly of antimony.

Brahe was the defender of Egyptian astronomy and the exposition that the earth was the center of the universe; which served to stimulate the researches of his young assistant, Kepler, who, however, in time became convinced that the theories of Copernicus, in which the sun was the real center, were more correct, and this indirectly influenced his discovery of the so-called Kepler's Laws.

*Gems and Dyestuffs.*—Boethius contributed his great "History of Gems and Stones." Libavius lectured here and gave his formula for the production of that "mystery of mysteries, most secret of all secret things, and healing and medicine of all things," and as a by-product, "the fuming liquor of Libavius" was discovered, the superb red dyestuff obtained by the action of tin salts on cochineal.

*Zinc and Drugs.*—To Paracelsus is given the credit for discovering zinc; but his followers, working at mixing all known chemicals in different ways and treating these chemicals in different manner (true, without any intelligent system), obtained hundreds of the substances now used in medicine, pharmacy, etc., and most of these under the patronage of Rudolph in the "Street of the Fakers."

These are not all, but serve to illustrate merely that contributions to medicine were made from this so-named "street"—being expressions of the useful outcroppings of a pseudoscience, the indirect influence of alchemy, and the influence of a greedy monarch in the rôle of a patron of science.

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## CLINICAL NOTES AND CASE REPORTS

### SPONTANEOUS RUPTURE OF THE AORTA\*

A CASE REPORT

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A CASE REPORT of spontaneous rupture of the aorta, with a dissecting aneurysm in early life, is of unusual interest because of its rarity and its perplexing pathogenesis. Klotz and Simpson,<sup>1</sup> in a recent analysis of cases collected from the literature, found only nine cases in individuals under twenty years of age, and thirty-three cases between twenty-one and forty years. We have recently observed an instance of this condition, unsuspected during life, but found at autopsy.

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